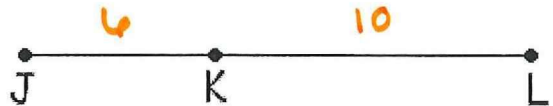


Choose reasons from the following list for #1 - 12

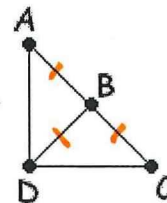
- | | | |
|----------------------------|--------------------------|------------------------|
| Given | Substitution Property | Subtraction Property |
| Segment Addition Postulate | Angle Addition Postulate | Def. of angle bisector |
| Def. of Midpoint | Transitive Property | Def. of congruent |
| Def. of complementary | Simplify | Addition Property |
| Def of supplementary | Def. of right angle | CLT |

1. Given: K is between J and L. JK = 6, KL = 10
Prove: JL = 16



Statements	Reasons
1. K is between J and L	1. <u>Given</u>
2. JK = 6, KL = 10	2. <u>Given</u>
3. JL = JK + KL	3. <u>SAP</u>
4. JL = 6 + 10	4. <u>Substitution</u>
5. JL = 16	5. <u>CLT</u>

2. Given: B is the midpoint of \overline{AC} . $\overline{BD} \cong \overline{AB}$
Prove: $\overline{BD} \cong \overline{BC}$



Statements	Reasons
1. $\overline{BD} \cong \overline{AB}$	1. <u>Given</u>
2. B is the midpoint of \overline{AC}	2. <u>Given</u>
3. $\overline{AB} \cong \overline{BC}$	3. <u>Def of mp</u>
4. $\overline{BD} \cong \overline{BC}$	4. <u>Transitive</u>

3. Given: $m\angle 1 = 75^\circ$; $m\angle 2 = 105^\circ$
 Prove: $\angle 1$ and $\angle 2$ are supplementary



Statements

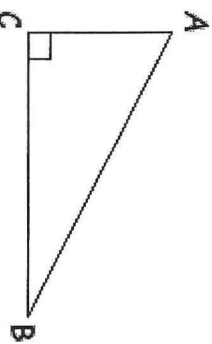
Reasons

1. $m\angle 1 = 75^\circ$; $m\angle 2 = 105^\circ$
2. $m\angle 1 + m\angle 2 = 75^\circ + 105^\circ$
3. $m\angle 1 + m\angle 2 = 180$
4. $\angle 1$ and $\angle 2$ are supplementary

1. Given
2. Substitution
3. CLT
4. Def. of supplementary \angle s
Supp.

4. Given: $\triangle ABC$ with $\angle C$ a right angle

$\angle A$ and $\angle B$ are complementary
 Prove: $m\angle A + m\angle B + m\angle C = 180$



Statements

Reasons

1. $\angle A$ and $\angle B$ are complementary
2. $m\angle A + m\angle B = 90$
3. $\angle C$ a right angle
4. $m\angle C = 90$
5. $m\angle A + m\angle B + m\angle C = 90 + 90$
6. $m\angle A + m\angle B + m\angle C = 180$

1. Given
2. Def of complementary \angle s
3. Given
4. Def of a \angle
5. Addition
6. Substitution
7. CLT

5. Given: R, J, and M are collinear
 $RJ = 3$, $RM = 8$
 Prove: $JM = 5$



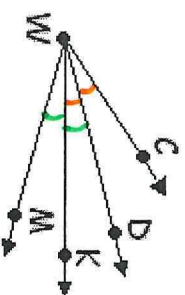
Statements

Reasons

1. R, J, and M are collinear
 $RJ = 3$, $RM = 8$
2. $RJ + JM = RM$
3. $3 + JM = 8$
4. $JM = 5$

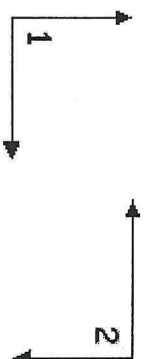
1. _____
2. _____
3. _____
4. _____

6. Given: \overrightarrow{WD} bisects $\angle CWK$; \overrightarrow{WK} bisects $\angle DWM$
 Prove: $\angle CWD \cong \angle KWM$



Statements	Reasons
1. \overrightarrow{WD} bisects $\angle CWK$ \overrightarrow{WK} bisects $\angle DWM$	1. <u>Given</u>
2. $\angle CWD \cong \angle DWK$	2. <u>Def of an \angle bisector</u>
3. $\angle DWK \cong \angle KWM$	3. <u>Def of an \angle bisector</u>
4. $\angle CWD \cong \angle KWM$	4. <u>Transitive</u>

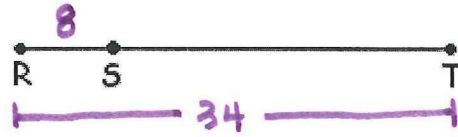
7. Given: $\angle 1$ and $\angle 2$ are right angles
 Prove: $\angle 1 \cong \angle 2$



Statements	Reasons
1. $\angle 1$ and $\angle 2$ are right angles	1. _____
2. $m \angle 1 = 90$; $m \angle 2 = 90$	2. _____
3. $m \angle 1 = m \angle 2$	3. _____
4. $\angle 1 \cong \angle 2$	4. _____

For #8 - 12, rewrite the statements in the correct order and then supply the reasons.

8. Given: $RS = 8$; $RT = 34$
 Prove: $ST = 26$



Statements	Reasons
1. $RS = 8$	1. Given
2. $RT = 34$	2. Given
3. $RS + ST = RT$	3. SAP
4. $8 + ST = 34$ $\begin{array}{r} 8 + ST = 34 \\ -8 \\ \hline ST = 26 \end{array}$	4. Substitution
5. $ST = 26$	5. Subtraction

$8 + ST = 34$	$ST = 26$	$RS + ST = RT$	$RS = 8$	$RT = 34$
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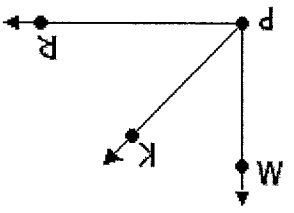
9. Given: $\angle C$ and $\angle B$ are complementary; $m \angle C = 50$
 Prove: $m \angle B = 40$

Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

$m \angle C + m \angle B = 90$	$m \angle B = 40$	$50 + m \angle B = 90$
$\angle C$ and $\angle B$ are complementary; $m \angle C = 50$		

11.

Given: $\angle MPR$ is a right angle
 Prove: $\angle MPK$ and $\angle KPR$ are complementary



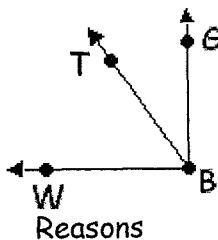
Statements	Reasons
1. $m\angle MPR = 90$	1.
2. $m\angle MPK + m\angle KPR = 90$	2.
3. $\angle MPR$ is a right angle	3.
4. $m\angle MPK + m\angle KPR = m\angle MPR$	4.
5. $\angle MPK$ and $\angle KPR$ are complementary	5.

10.

Given: $\angle A$ and $\angle B$ are supplementary
 $\angle C$ and $\angle B$ are supplementary
 Prove: $\angle A \cong \angle C$

Statements	Reasons
1. $m\angle A + m\angle B = m\angle C + m\angle B$	1.
2. $m\angle A + m\angle B = 180, m\angle C + m\angle B = 180$	2.
3. $\angle A \cong \angle C$	3.
4. $\angle A$ and $\angle B$ are supplementary	4.
5. $\angle C$ and $\angle B$ are supplementary	5.

12. Given: $\angle GBW$ is a right angle; $m \angleGBT = 35$
 Prove: $m \angleTBW = 55$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.

$\angle GBW$ is a right angle	$m \angleGBT + m \angleTBW = m \angleGBW$
$m \angleGBT = 35$	$m \angleTBW = 55$
$m \angleGBW = 90$	$35 + m \angleTBW = 90$